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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,767	01/20/2004	Henry Wurzburg	5707-06000	3110
7590	07/14/2006		EXAMINER LEE, SEUNG H	
Jeffrey C. Hood Meyertons, Hood, Kivlin, Kowert & Goetzel P.O. Box 398 Austin, TX 78767			ART UNIT 2876	PAPER NUMBER

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/762,767	Applicant(s) WURZBURG ET AL.	
	Examiner Seung H. Lee	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22, 24-44, 46-53 and 55-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 61-65 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-16, 19-22, 24, 26-44, 46-53, 55, 57-60, 66-72, 74-78 and 80-84 is/are rejected.
- 7) ☒ Claim(s) 10, 17, 18, 25, 56, 73, 79 and 85 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/28/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the response filed on 28 April 2006, which has been entered in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 6-9, 11-15, 21, 22, 26, 28, 47, 48, 52, 53, 57-59, 60, 66-68, 71, 72, 74, 77, 78, 80, 83, 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard et al. (US 6,460,143)(hereinafter referred to 'Howard') in view of Shih et al. (US 6,405,362)(hereinafter referred to as 'Shih').

Re claims 1, 2, 7, 9, 14, 15, 22, 47, 48, 53, 66, 67, 72, 74, 78, 80, 84:

Howard teaches a computer system (100) comprising a computer (102) such as a portable computer having a processor (108) connected to a host controller or USB host controller (114), a peripheral device (104) connected to the host controller via a USB bus (106), wherein the peripheral device is electronically disconnected from the host controller if the device is in the inactive state or shut down, and the resume event or connect event activates the system such as a portable computer from an inactive mode or the sleep mode (claims 1 and 4) (see figs. 1 and 2; col. 4, line 60- col. 7, line 35).

However, Howard fails to teach or fairly suggest that the host controller causes an appearance to the host controller that the device is not coupled to the host controller when the device is electronically disconnected and the device is not a card reader.

Shih teaches a Palm-size PC having an automatic cleanup function for releasing the resource (i.e., changing of appearance on the host system by not displaying the icons, etc.) used by the card reader (not shown) when it detects the removal of the card such as the Compact Flash memory card wherein the card reader is part of the PC (not particularly shown) (see figs. 1-3; col. 8. line 36- col. 9, line-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the teachings of Shih to the system of Howard in order to prevent system crashes caused by attempting to read memory that is removed by uninstalling display icons or register entries.

Re claim 6, 21, 52, 71, 77, 83: The awakening system by the wake circuit occurred when the bus event is detected wherein such detection including connection of the device, that is, the host controller does not create bus activity when the no devices are coupled to the host controller (claims 1 and 4),

Re claim 8: The processor (202) of computer system (200) is awakened if the electronically disconnect is discontinued by activity of the device for operating USB host controller (212) (see fig.2; col. 6, lines 39-59),

Re claims 11, 26, 57: The USB host controller (114) serves as a peripheral bus interface for peripheral device,

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Re claims 12, 27, 58: The device is electronically disconnecting comprises a pull down resistor to ground pulls the USB D+ data line low wherein method servers as electronically removing a pull up resistor (col. 2, lines 16-43),

Re claim 13, 28, 59: The OR gate (322) receives inputs from the DV+ and DV- serving as tri-stating the DV+ and the DV- line (see fig. 3; col. 7, line 36- col. 9, line 13),

Re claims 60, 68: The activity at the device cause the USB host controller to be awakened in which serves as the device remains inactive when the device is electronically disconnected from the host controller for allowing the system to enter the sleep mode(col. 5, lines 30-52),

4. Claims 3, 16, 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard as modified by Shih, and further in view of Chang (US 2004/0027879, of record).

The teachings of Howard/Shih have been discussed above.

Although, Howard/Shih teaches the computer system comprising card reader with sleep mode capability, they fail to particularly teach the device is a hub.

Chang teaches a flash card reader (13) comprises a insertion slots (111-114) operated by the controller (132) serving as a card reader, the reader also comprises a USB jacks (14) for receiving USB devices wherein the reader serving as a hub for receiving USB devices such as joystick or pen driver (see figs. 1-2; paragraphs 0011-00014).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chang to the teachings of Howard in order to provide user-friendly system for providing a plurality types of card slots for reading/writing information from the different card types such as a SM card type, a MMC card type, etc. moreover, such modification (i.e., the card reader having additional USB jacks) would expands usability of the USB technology by connecting USB compatible devices such as USB pointing pens or USB barcode reader, etc. furthermore, such modification (i.e., the electrical disconnect from the host controller is discontinued if inserting card into the card reader detected) would have been an obvious to one of ordinary skill in the art to realize that such inserting card into the card reader activate the system by means of connect event in order to access the inserted card therein.

5. Claims 4, 5, 19, 20, 24, 50, 51, 55, 69, 70, 75, 76, 81, 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard as modified by Shih, and further in view of Knight et al. (US 2003/0167345, of record)(hereinafter referred to as 'Knight').

The teachings of Howard/Shih have been discussed above.

Although, Howard/Shih teaches the system for connecting the peripheral device such as the USB device with sleep mode capability, they fails to particularly teach the device will be in an inactive state if the device has not been used in a predetermined/specified time period or wait period.

Knight teaches a bridge system (200') comprising a DSP (224) for communicating with USB OTG (on-the-go) device wherein the USB OTG will enter wait

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mode, then enter the power saving mode if there is no communication is detected for a predetermined time period (see figs. 11-14; paragraphs 0192-0232).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Knight to the teachings of Howard/Shih in order to save power by entering the device into the sleep mode until it is necessary to operate the device by awakening the device or providing power to operate when it detects signals from the device or the processor of the computer initiate operation requiring use of the device.

6. Claims 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Chang and Shih.

Re claim 29, 31, 33-36: Howard teaches a computer system (100) comprising a computer (1020 such as a portable computer having a processor (108) connected to a host controller or USB host controller (114), a peripheral device (104) connected to the host controller via a USB bus (106), wherein the peripheral device is electronically disconnected from the host controller if the device is in an active state or shut down, and the resume event or connect event activates the system such as a portable computer from an inactive mode or the sleep mode (claims 1 and 4) (see figs. 1 and 2; col. 4, line 60- col. 7, line 35).

However, Howard fails to particularly teach the device is a card reader or a hub, the hub is permanently coupled to a portable computer.

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Chang teaches a flash card reader (13) comprises a insertion slots (111-114) operated by the controller (132) serving as a card reader, the reader also comprises a USB jacks (14) for receiving USB devices wherein the reader serving as a hub for receiving USB devices such as joystick or pen driver (see figs. 1-2; paragraphs 0011-00014).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chang to the teachings of Howard in order to expands usability of the USB technology by connecting USB compatible devices such as USB pointing pens or USB barcode reader, etc. Moreover, coupling the USB hub to the portable computer is well known in the art at the time the invention for utilizing the USB technologies.

However, Howard/Chang fails to particularly teach that a device detects logic and causing appearance to the host controller.

Shih teaches a Palm-size PC having an automatic cleanup function for installing/releasing the resource (i.e., changing of appearance on the host system by not displaying the icons, etc.) used by the card reader (not shown) when it detects the /insertion/removal of the card such as the Compact Flash memory card wherein the card reader is part of the PC (not particularly shown) (see figs. 1-3; col. 8. line 36- col. 9, line-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the teachings of Shih to the system of Howard in order to

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prevent system crashes caused by attempting to read memory that is removed by uninstalling display icons or register entries.

Re claim 30: The awakening system of Howard by the wake circuit occurred when the bus event is detected wherein such detection including connection of the device, that is, the host controller does not create bus activity when the no devices are coupled to the host controller (claims 1 and 4),

Re claim 32: The processor (202) of computer system (200) is awakened if the electronically disconnect is discontinued by activity of the device for operating USB host controller (212) (see fig.2; col. 6, lines 39-59),

Re claim 37: The USB circuitry detects the full-speed or low-speed device wherein such device is subjected of the power-conserving device connected to the system (col 2,lines 34-43).

Re claim 38: The ROM (206) stores operation instruction.

7. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard as modified by Chang and Shih as applied to claim 29 above, and further in view of Knight et al. (US 2003/0167345, of record)(hereinafter referred to as 'Knight').

The teachings of Howard/Chang/Shih have been discussed above.

Although, Howard/Chang/Shih teaches the system for connecting the peripheral device such as the USB device with sleep mode capability, he fails to particularly teach

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the device will be in an inactive state if the device has not been used in a predetermined/specified time period or wait period.

Knight teaches a bridge system (200') comprising a DSP (224) for communicating with USB OTG (on-the-go) device wherein the USB OTG will enter wait mode, then enter the power saving mode if there is no communication is detected for a predetermined time period (see figs. 11-14; paragraphs 0192-0232).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Knight to the teachings of Howard/Chang/Shih in order to save power by entering the device into the sleep mode until it is necessary to operate the device by awakening the device or providing power to operate when it detects signals from the device or the processor of the computer initiate operation requiring use of the device.

However, Howard/Chang fails to particularly teach that causing appearance to the host controller.

Shih teaches a Palm-size PC having an automatic cleanup function for installing/releasing the resource (i.e., changing of appearance on the host system by not displaying the icons, etc.) used by the card reader (not shown) when it detects the /insertion/removal of the card such as the Compact Flash memory card wherein the card reader is part of the PC (not particularly shown) (see figs. 1-3; col. 8. line 36- col. 9, line-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the teachings of Shih to the system of Howard in order to

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prevent system crashes caused by attempting to read memory that is removed by uninstalling display icons or register entries.

8. Claims 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Chang.

Re claim 40-42: Howard teaches a computer system (100) comprising a computer (1020 such as a portable computer having a processor (108) connected to a host controller or USB host controller (114), a peripheral device (104) connected to the host controller via a USB bus (106), wherein the peripheral device is electronically disconnected from the host controller if the device is in an active state or shut down and the awakening the system by exiting sleep mode or inactive mode when bus events detect certain events such as connecting the device (see figs. 1 and 2; col. 4, line 60-col. 7, line 35),

However, Howard fails to particularly teach the device is a card reader or a hub.

Chang teaches a flash card reader (13) comprises a insertion slots (111-114) operated by the controller (132) serving as a card reader, the reader also comprises a USB jacks (14) for receiving USB devices wherein the reader serving as a hub for receiving USB devices such as joystick or pen driver (see figs. 1-2; paragraphs 0011-00014).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chang to the teachings of Howard in order to provide user-friendly system for providing a plurality types of card slots for reading/writing information from the different card types such as a SM card type, a MMC card type, etc. moreover, such modification (i.e., the card reader having additional USB jacks) would expands usability of the USB technology by connecting USB compatible devices such as USB pointing pens or USB barcode reader, etc. furthermore, such modification (i.e., the electrical disconnect from the host controller is discontinued if inserting card into the card reader detected) would have been an obvious to one of ordinary skill in the art to realize that such inserting card into the card reader activate the system by means of connect event in order to access the inserted card therein.

However, Howard/Chang fails to particularly teach that the host controller causes an appearance to the host controller that the device is not coupled to the host controller when the device is electronically disconnected and the device is not a card reader.

Shih teaches a Palm-size PC having an automatic cleanup function for installing/releasing the resource (i.e., changing of appearance on the host system by not displaying the icons, etc.) used by the card reader (not shown) when it detects the /insertion/removal of the card such as the Compact Flash memory card wherein the card reader is part of the PC (not particularly shown) (see figs. 1-3; col. 8. line 36- col. 9, line-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the teachings of Shih to the system of Howard/Chang in

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order to prevent system crashes caused by attempting to read memory that is removed by uninstalling display icons or register entries.

Re claim 43: The USB circuitry detects the full-speed or low-speed device wherein such device is subjected of the power-conserving device connected to the system (col 2,lines 34-43),

Re claim 44: The ROM (206) stores operation instruction.

9. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard as modified by Chang and Shih as applied to claim 40 above, and further in view of Knight et al. (US 2003/0167345, of record)(hereinafter referred to as 'Knight').

The teachings of Howard/Chang/Shih have been discussed above.

Although, Howard/Chang/Shih teaches the system for connecting the peripheral device such as the USB device with sleep mode capability, he fails to particularly teach the device will be in an inactive state if the device has not been used in a predetermined/specified time period or wait period.

Knight teaches a bridge system (200') comprising a DSP (224) for communicating with USB OTG (on-the-go) device wherein the USB OTG will enter wait mode, then enter the power saving mode if there is no communication is detected for a predetermined time period (see figs. 11-14; paragraphs 0192-0232).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Knight to the teachings of

Howard/Chang/Shih in order to save power by entering the device into the sleep mode until it is necessary to operate the device by awakening the device or providing power to operate when it detects signals from the device or the processor of the computer initiate operation requiring use of the device.

Allowable Subject Matter

10. Claims 61-65 are allowed.
11. Claims 10, 17-18, 25, 56, 73, 79, and 85 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. The following is a statement of reasons for the indication of allowable subject matter:

The best prior arts of record fails to particularly teach that the system comprise a sideband signal wherein such sideband signal is used to signal the device to electronically reconnect after the device has been electronically disconnected from as set forth in the claims

Response to Arguments

13. Applicant's arguments filed 28 April 2006 have been fully considered but they are not persuasive.

In response to the applicant's argument that "...Howard fails to disclose electrical disconnection of the peripheral devices, much less doing so if the device is not in an active state.....detecting whether a device is in an active state, and electrically disconnecting the device from the host controller if the device is not in an active state..." (see page 3, line 2+), the Examiner respectfully disagrees with the applicant wherein Howard teaches that the system goes into the inactive state or shut down status for conserving power wherein such shut down or inactive status occurs by disconnecting of the electric. Accordingly, given its broadest reasonable interpretation, the teachings of Howard meets the claimed limitations.

In response to applicant's argument that "...Applicant respectfully submits that this is not pertinent to electrical disconnection of a device from a host controller. In the instant claims, the device remains physically coupled to the host controller; in contrast, Shih specifically disclose physical removal of a memory card and fails to disclose the electrical disconnection of a device described in the claims.....Howard in view of Shih....fails to teach or suggest wherein the device being electrically disconnected from the host controller causes an appearance to the host controller that the device is not coupled to the hose controller." (see page 4, line 17+), the Examiner respectfully disagrees with the applicant wherein Howard teaches the device is electrically disconnected for conserving power and Shih teaches to change the appearance of the device for preventing accidental access of the disconnected device. Therefore, given its broadest reasonable interpretation of this instant claimed invention, the combination of Howard and Shih meets the claimed limitation.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been an obvious to one of ordinary skill in the art at time the invention was made to adapt the teaching of Shih for preventing access of the disconnected device by removing the icons or register entries from the display as taught by Shih and such functions are well known in the art particularly when the computer system adapt the Universal Serial Bus (USB) for transferring the data between the devices.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday-Friday, 7:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SEUNG HO LEE
PRIMARY EXAMINER